

Mineral Industry Surveys

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VANADIUM IN DECEMBER 1999

According to Metal Bulletin, U.S. ferrovanadium prices during December ranged from \$4.35 to \$4.65 per pound of vanadium content, compared with \$4.60 to \$4.80 in November. The range for European ferrovanadium prices was \$7.45 to \$7.95 per kilogram in December. In November, European ferrovanadium prices ranged from \$7.90 to \$8.80. For vanadium pentoxide, the December range as published by Metal Bulletin was \$1.25 to \$1.40 per pound, while in November it was \$1.35 to \$1.50 per pound.

Prices for vanadium pentoxide and ferrovanadium continued to

decrease during December. Individuals familiar with the industry continued to attribute the lower prices to an abundant supply of material (Metal Bulletin, 1999).

Reference Cited

Metal Bulletin, 1999, North American market sees weaker prices: Metal Bulletin, no. 8434, December 13, p. 9.

TABLE 1
U.S. CONSUMPTION AND CONSUMER STOCKS OF VANADIUM, BY FORM 1/

(Kilograms, contained vanadium)

	1998		1999			
	Consumption	Stocks	November		December	
			Consumption	Stocks r/	Consumption	Stocks
Ferrovandium 2/	4,010,000	302,000	247,000 r/	327,000	273,000	303,000
Vanadium-aluminum alloy	W	9,000	W	14,100	W	13,000
Other 3/	387,000	3,000	33,700 r/	10,600	37,300	9,790
Total	4,390,000	314,000	280,000 r/	352,000	311,000	326,000

r/ Revised. W Withheld to avoid disclosing company proprietary data; included with "Other."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes other vanadium-iron-carbon alloys as well as vanadium oxides added directly to steel.

3/ Includes other vanadium alloys, vanadium metal, vanadium pentoxide, vanadates, chlorides, other specialty chemicals, and items indicated by symbol "W."

TABLE 2
U.S. CONSUMPTION OF VANADIUM, BY END USE 1/

(Kilograms, contained vanadium)

	1998	1999		
		November	December	Year to date
Steel:				
Carbon	1,650,000	94,300 r/	96,500	1,160,000
High-strength low-alloy	950,000	76,900 r/	72,800	81,500
Stainless and heat-resisting	42,400	6,400	7,710	840,000
Full alloy	891,000	46,400 r/	63,700	949,000
Tool	269,000	26,100	28,400	343,000
Total steel	3,800,000	250,000 r/	269,000	3,370,000
Superalloys	19,900	1,160	1,380	15,400
Miscellaneous and unspecified 2/	571,000	29,100 r/	40,300	443,000
Total consumption	4,390,000	280,000 r/	311,000	3,830,000

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes cast irons, alloys excluding steel and superalloys, chemical and ceramic uses, and other miscellaneous and unspecified uses.

TABLE 3
U. S. IMPORTS AND EXPORTS OF ALUMINUM-VANADIUM MASTER ALLOY AND
VANADIUM METAL, INCLUDING WASTE AND SCRAP 1/

(Kilograms, gross weight)

	Aluminum-vanadium master alloy		Vanadium metal, including waste and scrap	
	Quantity	Value	Quantity	Value
Imports for consumption:				
1998	298,000	\$496,000	12,200	\$491,000
1999:				
September	--	--	1,140	87,000
October	99,200	121,000	100	12,800
November:				
Germany	3,550	10,600	43	22,400
Russia	--	--	1,100	57,000
Total	3,550	10,600	1,140	79,400
Year to date p/ 2/	1,210,000	1,680,000	24,200	751,000
Exports:				
1998	856,000	11,500,000	346,000	7,160,000
1999:				
September	79,700	522,000	8	4,300
October	49,500	325,000	25,600	339,000
November:				
Canada	37,900	555,000	--	--
Germany	1,590	42,900	--	--
Hong Kong	8,920	116,000	--	--
Israel	378	6,410	--	--
Japan	858	16,300	--	--
New Guinea	1,640	48,300	--	--
United Kingdom	--	--	23,400	399,000
Total	51,300	784,000	23,400	399,000
Year to date	436,000	5,340,000	177,000	3,190,000

p/ Preliminary.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ May include revisions to previous months' data.

Source: Bureau of the Census.

TABLE 4
U. S. IMPORTS AND EXPORTS OF FERROVANADIUM, VANADIUM PENTOXIDE (ANHYDRIDE) AND
OTHER OXIDES AND HYDROXIDES OF VANADIUM 1/

(Kilograms, contained vanadium)

	Ferrovanadium		Vanadium pentoxide (anhydride) 2/		Other oxides and hydroxides of vanadium	
	Quantity	Value	Quantity	Value	Quantity	Value
Imports for consumption:						
1998	1,620,000	\$39,300,000	847,000	\$12,300,000	33,000	\$574,000
1999:						
September	208,000	2,000,000	30,700	273,000	--	--
October	219,000	2,220,000	30,800	274,000	--	--
November:						
Austria	28,800	276,000	--	--	--	--
Belgium	26,900	241,000	--	--	--	--
Canada	14,200	153,000	--	--	--	--
China	47,700	389,000	--	--	--	--
Japan	293	15,000	--	--	--	--
South Africa	51600	449000	--	--	--	--
Total	169,000	1,520,000	--	--	--	--
Year to date	1,750,000	19,200,000	176,000	1,660,000	--	--

See footnotes at end of table.

TABLE 4--Continued
U. S. IMPORTS AND EXPORTS OF FERROVANADIUM, VANADIUM PENTOXIDE (ANHYDRIDE) AND
OTHER OXIDES AND HYDROXIDES OF VANADIUM 1/

(Kilograms, contained vanadium)

	Ferrovanadium		Vanadium pentoxide (anhydride) 2/		Other oxides and hydroxides of vanadium	
	Quantity	Value	Quantity	Value	Quantity	Value
Exports:						
1998	579,000	\$13,700,000	681,000	\$6,850,000	232,000	\$2,830,000
1999:						
September	26,000	337,000	65,800	333,000	6,090	26,000
October	1,680	26,900	62,100	334,000	4,700	57,800
November:						
Canada	--	--	--	--	1,360	19,500
Mexico	--	--	1,590	6,800	--	--
New Zealand	--	--	578	8,530	--	--
Singapore	89	9,020	--	--	--	--
South Africa	--	--	607	5,760	--	--
Trinidad and Tobago	--	--	167	4,790	--	--
Total	89	9,020	2,940	25,900	1,360	19,500
Year to date p/ 3/	210,000	3,070,000	744,000	4,240,000	68,200	636,000

p/ Preliminary.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ May include catalysts containing vanadium pentoxide.

3/ May include revisions to previous months' data.

Source: Bureau of the Census.

TABLE 5
U. S. IMPORTS FOR CONSUMPTION OF VANADIUM-BEARING ASH, SLAG 1/

(Kilograms, contained vanadium pentoxide)

	Ash and residues		Ash and residues (not from the manufacture of iron and steel)		Slag, from the manufacture of iron and steel	
	Quantity	Value	Quantity	Value	Quantity	Value
Imports for consumption:						
1998	3,030,000	\$9,960,000	2,280,000	\$1,710,000	1,250,000	\$10,500,000
1999:						
September	261,000	918,000	280,000	141,000	--	--
October	142,000	78,200	353,000	161,000	292,000	378,000
November:						
Canada	--	--	452,000	179,000	--	--
Year to date	1,800,000	6,940,000	2,450,000	1,230,000	1,150,000	1,740,000

1/ Data are rounded to three significant digits; may not add to totals shown.

Source: Bureau of the Census.

TABLE 6
U. S. IMPORTS FOR CONSUMPTION OF MISCELLANEOUS VANADIUM CHEMICALS 1/

(Kilograms, contained vanadium)

	Sulfates		Vanadates	
	Quantity	Value	Quantity	Value
Imports for consumption:				
1998	350	\$19,300	129,000	\$1,410,000
1999:				
September	--	--	416	15,600
October	--	--	16,000	165,000
November:				
Germany	--	--	32,400	200,000
Japan	--	--	7	26,500
South Africa	--	--	11,300	97,100
Total	--	--	43,700	324,000
Year to date p/ 2/	8	14,300	148,000	1,500,000

p/ Preliminary.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ May include revisions to previous month's data.

Source: Bureau of the Census.